

Abstract Submitted  
for the DNP07 Meeting of  
The American Physical Society

**Dynamical coupled-channel approach to omega meson production with pions and photons**<sup>1</sup> MARK PARIS<sup>2</sup>, EBAC @ Jefferson Lab, T.-S. HARRY LEE<sup>3</sup>, Argonne National Lab, TORU SATO, Osaka University, EXCITED BARYON ANALYSIS CENTER COLLABORATION — A dynamical coupled-channel formalism is employed in the study of pion and photon induced omega meson production. We consider center-of-mass energies in the region from threshold to 2 GeV. Extensive optimization on parallel processors has been used to determine the parameters of the model hadronic Lagrangian. Non-resonant and resonance parameters are extracted from a least-squares global fit to the available observed differential cross section for  $\pi N \rightarrow \omega N$  and  $\gamma N \rightarrow \omega N$ . The extracted strong and electromagnetic couplings are then used to calculate the electroproduction data. The importance of coupled-channel and off-shell effects is emphasized in comparisons to approximate  $K$  matrix and other models.

<sup>1</sup>This work supported by the US Dept. of Energy, Office of Nuclear Physics Division under contract No. DE-AC02-06CH11357 and contract No. DE-AC05-06OR23177.

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Date submitted: 21 Jun 2007

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